



Air Pollution

Environmental Technology Partnerships

U.S. Environmental
Protection Agency

Office of Research and Development
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Cooperative Research and Development Agreement With Rohm & Haas

Effects of Atmospheric Deposition on Painted Substrates

Participants

This Cooperative Research and Development Agreement (CRADA) brings together Rohm & Haas Company of Spring House, Pennsylvania and the U.S. Environmental Protection Agency's (EPA) Atmospheric Research and Exposure Assessment Laboratory (AREAL) in the Office of Modeling, Monitoring Systems and Quality Assurance, Office of Research and Development.

Purpose

This CRADA involves conduction of a paint substrate exposure study of different coatings. Unique exposure facilities designed by AREAL are being used to test the behavior and durability of various materials such as Rohm & Haas paint coatings under conditions of atmospheric deposition (e.g., acid rain).

Background

AREAL and Rohm & Haas initiated a joint study of coated wood substrates using covering spray devices that are located near environmental monitoring stations in Research Triangle Park, North Carolina. These devices permit the study of the effects of natural rain, clean simulated rain, and atmospheric deposition of gases on painted surfaces.

AREAL, which has expertise in the field of air, toxics and pollution prevention, conducts intramural and extramural research related to the collection and characterization of air pollutants; the determination of air pollutant trends and patterns; and the assessment of human and ecosystem exposures to air pollutants.

Results

This CRADA is ongoing, involving a long-term exposure study. To date the joint research between Rohm & Haas and AREAL has resulted in a better understanding of the effects of wet and dry acidic deposition on painted wood surfaces and the development of more durable coatings for the consumer.

This is one of more than 50 cooperative research and development agreements EPA has with various U.S. businesses, consortiums, trade associations, academic institutions and state and local governments under the Federal Technology Transfer Act of 1986. These agreements serve as a mechanism for EPA to work with private industry to develop new pollution prevention and control technologies and efficiently bring them into the marketplace.

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